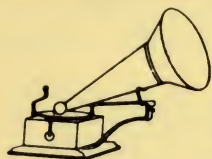


Hillandale

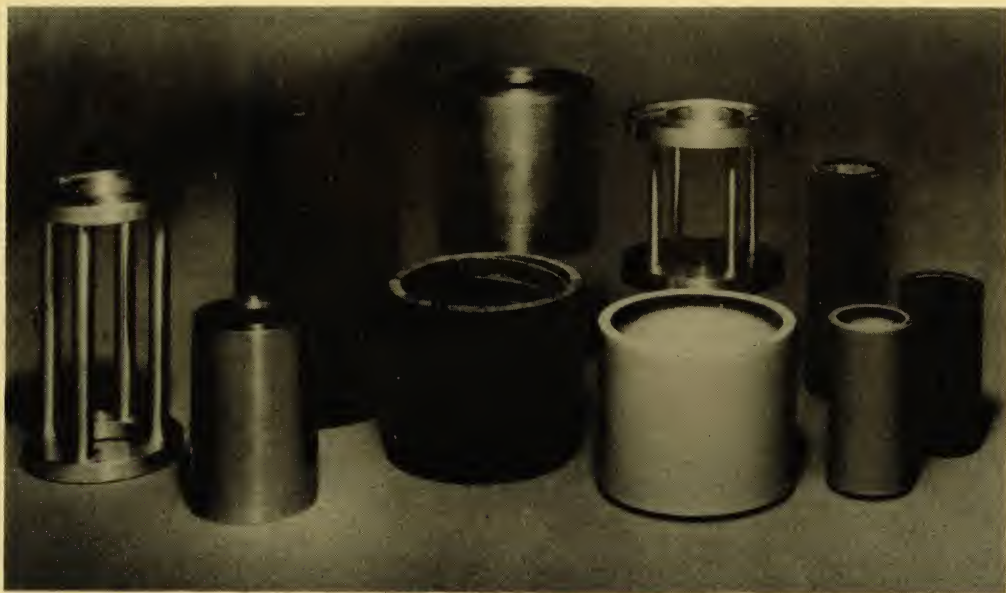


Journal of the
City of London
Phonograph and
Gramophone Society

THE HILLANDALE NEWS

June 1985 No. 144

ISSN-0018-1846



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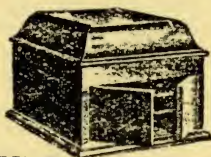
(See Page 222)

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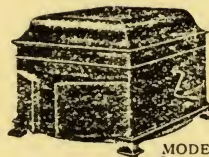


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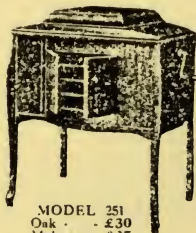


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THE BIRTH OF ELECTRICAL RECORDING

by Frank Andrews

It was in June 1925 that the first H.M.V. electrical recording was issued: B 2039, Meyer Davis's Le Paradis Band playing two foxtrots. (This record was pressed from 'daughter' matrices derived from imported 'mothers' recorded by Victor in America). This was not the first electrical recording ever offered to the public (that honour goes to the Guest and Merriman recording of the Burial of the Unknown Soldier on November 11th 1920), but it did initiate the continuous sale of electrical recordings.

Columbia had pressed the Guest and Merriman recording, and continued with their own experiments; simple forms of moving coil microphones were under development in their laboratory in 1924. The Gramophone Company were also experimenting and Edward Fowler, who later became recording manager for E.M.I., is on record as stating that H.M.V. made its first experimental electrical recording in 1924. This was King George V's opening speech for the Empire Exhibition on St. George's Day, April 23rd, at Wembley.

Experimental work on electrical recording had been under way in America since about 1919 by Henry C. Harrison and other electrical engineers under the supervision of J.P. Maxfield of the Bell Laboratories (the research division of the American Telegraph and Telephone Company). There, successful recordings were produced in which it was claimed that the captured frequency range had been extended by two-and-a-half octaves. When played through the newly-developed exponential horns, it was said, this gave some semblance of reality to the bass notes and allowed the higher treble frequencies to be heard for the first time.

The Bell Laboratories sent their waxes to the American Pathé factory for processing. Russell Hunting, chief of recording, and Frank Capps, the Managing Director, there were friends of Louis Sterling (Managing Director of Columbia in London). Some duplicate pressings were sent by Capps to Sterling and these arrived on Christmas Eve. On hearing the recordings on Christmas Day, Sterling immediately booked a passage to America and sailed on a liner on Boxing Day, so impressed was he by the new recordings.

The Western Electric Company in America had become the licensed owner of the system, which became known as their's. Victor had already refused to take on the process as a licensee and the American Columbia business, then independent of Columbia in the U.K., was in such poor financial straits that it could not, or would not, find 50,000 dollars, plus royalty payments, to secure the system.

Such was the situation on Sterling's arrival in America. Well aware that he must secure this new electric process for his own company, he promptly borrowed (so it has been said) two-and-a-half million dollars and bought a controlling interest in the Columbia Phonograph Co., which thus became a branch of the English company. This enabled him to contract with Western Electric for the rights in the system for both companies.

Having second thoughts, Victor also entered into a contract, and so the system was made available to the Gramophone Company here, which Victor then controlled. The system was exclusive to Columbia and the Victor/Gramophone companies, and the first issues of electrically recorded discs, made from American matrices, came out on the summer supplements for Columbia and H.M.V. records in 1925, sixty years ago.

Columbia's first issue appears to have been 3695-140545 and 140546, W.C.Polla's Clover Garden Orchestra, issued in the July 1925 supplement as the Denza Dance Band and given English matrix numbers A2162 and A2161. If it can be confirmed that these sides were electrically recorded, then a W and a W in a circle should be applied to the matrix numbers respectively. A lower catalogue number (3673-W140824 and W140707) was electrically recorded, but it was not issued until November 1925. This too was given substitute English matrix numbers (WA2414 and WA2413).

The most sensational record issued was the September 1925 Columbia 9048, The Associated Glee Clubs of America singing John Peel and, with audience participation making a 5,580-voice choir, *Adeste Fideles*. This had been recorded in the Metropolitan Opera House, New York, on March 31st 1925.

By this time the Gramophone Company had been recording electrically from June 22nd, when a Mrs. O'Neill was recorded on masters Bb6233-1 and Bb6233-2 and a Miss Lambelet, who was to become a new Zonophone artist, was recorded on Bb6234-1. A Miss Nancy Royle (later on Vocalion) was recorded on Bb6237- and Bb6237-2. Lambelet and a Beryl Costello also made acoustic recordings that day. None of these recordings were put into production.

The first English electrical recordings on H.M.V. were in the mid-August supplement with Cyril Ramon Newton (B.2071 - Bb6243-1), Jack Hylton and his Orchestra (B.2072 - Bb6245-2), and the Mayfair Orchestra (C.1214 - Cc6249-2 and Cc6250-2). Newton and Hylton's Orchestra had been recorded on June 24th, the Mayfair Orchestra the day after.

After Columbia had taken a controlling interest in Carl Lindstroem A.G. of Berlin and the associated Trans-Oceanic Trading Company of Holland and formed Columbia International Limited (in October 1925), the Beka, Parlophone and Odeon catalogues had access to the Western Electric system. It was some time, however, before Parlophone in England began its use. Parlophones were to be issued with other methods of electrical recording through the use of Okeh masters from America and the £-within-a-circle prefixed matrix system which was employed in Berlin.

Columbia did not begin electrical recording in London until October 1st 1925 and the first 10-inch issue was made in November: 3785 - WA2501-2 and WA2507-1 (Percival Mackey's Band). The second matrix was recorded on the 7th. Mackey's Band also recorded WA2502-3 and WA2503-3 on October 1st, and these were the first two sides made to replace previously recorded acoustic titles for 3761 - A2398 and A2399. 3762 was treated in the same way, with recordings taken on the 5th. The first electric 12-inch was matrix WAX 1094 with three takes, which was not used, nor were subsequent matrices until WAX 1101-2 and 1102-2 were issued on 9062 in December 1925 - The 1925 Orchestra/P.Mackey. Some of the numbers between WAX 1094 and WAX 1100 were used with higher takes from later recording sessions, and issued in 1926.

Zonophone's first electrical record was in the April 1926 supplement, matrix Yy7718. It was recorded on January 17th 1926, along with Yy7716, Yy7717 and Yy7719.

Columbia's first English electric Regal, G.8559 - WA2806-2 and WA2807-1 (Greening's Band under a pseudonym) was also issued in April 1926, having been recorded on February 2nd. Regals from American electric matrices had already appeared.

When Zonophone began to make use of electrical recording, so also did the British Homophone Company's Homochords and the Sterno Manufacturing Co. brought out a series of Sterno records. Both were made from Zonophone or other Gramophone Company

masters. The Homochords were those from D.974 onwards and the Sternos, with blue, grey white and black labels, were in the S.100 series, probably sold overseas. Ariel Grand records, then made from Zonophone masters for the Sheffield mail order stores George C. Graves, also became electric.

Another electrically recorded disc was announced in April 1926 by the Chappell Piano company. Brunswick records (for which Chappells were the Sole Concessionaires) were now described as being made by the 'Light Ray System', but I believe that such records had been on sale since January 1926, when Chappell were saying of their records that they had 'Amazing Realism and Musical Charm beyond Compare' - 'They seem to make things more real - and they do!' - 'It is appreciable at once - their Realism, Fuller Tone, their Wonderful Catching of both Spirit and Performance' - 'Secrets of method has placed them in a predominant position throughout the World'. The Light Ray recording method was used by the Brunswick, Balke Collender company in America, using Pallatrope recording machines developed by the General Electric company in association with others.

At the end of the first twelve months of electrical recording, therefore, at least eight different labels had electrical recordings on sale. With the Western Electric process exclusive to the Gramophone and Columbia companies, and the Light Ray method exclusive to Brunswick, other competitors were compelled to look to themselves or elsewhere for alternative systems which would not infringe patent rights.

In September 1926, Edison Bell advertised for the first time that its Winner and Velvet Face records were now electrically recorded. The system was that developed by P.G.H.Voigt, using his remarkable 'Malabar' cutting head, and possibly also his 'wet sock' microphones. Earlier, in October 1925, a Winner record had been sold called 'Mr. and Mrs. Brown at a Football Match', in which it was claimed that 4,851 voices could be heard: a riposte to Columbia's September disc of 4,850 voices! This was too early for an electrically recorded Winner, but the incredulous were advised to listen to the record and 'count the voices for yourself' if they doubted the claim.

The next company to release its own electrical recordings was Parlophone (then a subsidiary of Columbia International Ltd.) Two of its records were described as electric in its October 1926 supplement: these were E.5647 - We854-1 and E.5648 - We855-2 and We856-2, the three sides being by Ronnie Munro and his Orchestra. The fourth side was from an imported Okeh master from the U.S.A. (All the leading companies were issuing electric records derived from American imported masters at this time). Recording dates for Parlophone records are now not usually obtainable, but the above matrices were not the first electrics; the first were We829 and We830, which made up E.5677, not released until December 1926. The first 12-inch issue came in March 1927 (Keith Ellis in two arias from 'Messiah', E.10359 - WXe977-1 and WXe980-2). As with Columbias and Regals, the 'W' prefix to the matrix number indicated a Western Electric Co. process. From then on, some of the electrical Ariel Grand Records were pressed from Parlophone matrices.

In November 1926, the Vocalion Gramophone Co. Ltd. announced its electrical recordings on Vocalion and Aco discs, but it did not at first state that they were made under a five-year licence from Marconi's Wireless Telegraph Co. Ltd., which they had contracted for in the previous April. Vocalion's customers were also allowed access to the process and it soon followed that the Beltona, Coliseum, Guardsman, Meloto and Scala records began to carry the M-within-a-circle logo on their labels that indicated use of the system.

It was not until May 1927 that Crystalate described its vocal, instrumental and orchestral issues as being electrically recorded, in a 'Sound Wave' advertisement. The

dance records were not so described. The June issues, as set out in 'The Talking Machine and Wireless Trade News', had the 'dances' as electric, and not the rest of the repertoire! (These last observations correct my comments on the same matter in these pages for December 1983, Page 297, first paragraph, which please amend). Crystalate had begun experimenting with electrical recording at the close of 1926, but I do not know who was responsible for the development work. The March 1927 Imperial catalogue never mentioned electrical recording. What Imperial carried the first electrical recordings from what imported American masters?

Pathé Freres Pathephone Ltd. also began including electrically recorded Actuelles in its monthly supplements in the Spring of 1927. The first in April, with an E-prefixed catalogue number, was from American matrices recorded by American Pathé's 'Pathephonic' process. Another firm using Pathé pressings at the time was the Scala Record Co. Ltd., for its Scala Ideal and Grafton labels. The various makes of small-diameter record also gradually moved over to electrical recording alongside full-sized discs.

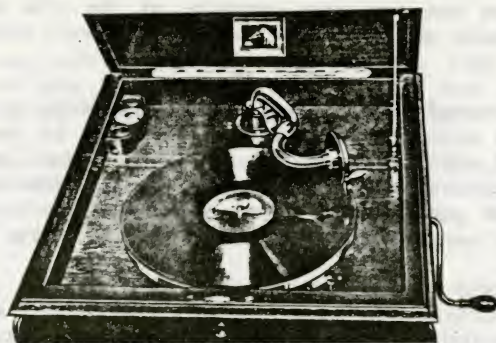
As it was obviously commercially expedient for the manufacturers and factors of records not to advertise the fact that a new and revolutionary recording process was in use, for fear of being lumbered with an unsaleable stock of recently recorded repertoire which had cost thousands of pounds and had not yet been placed in the supplements, they refrained from spreading the news. Columbia had just invested a great deal of money in symphonic recordings. Parlophone had just completed the whole of Beethoven's nine symphonies through its German connection; and other firms had similar problems.

At least two writers were immediately aware that electrical recordings had begun to filter into the supplements. In the September 1925 edition of The Gramophone, Compton Mackenzie referred to a new disc of V. de Pachmann as 'electrically recorded' and gave his opinion that the piano had never been so well recorded before. He advised against playing the record with a steel needle, suggesting that a fibre would be more successful. But he did express concern about the likely 'telephonic effect' of electrical recording. In October he remarked that it was likely to kill the 'internal amplifier', by which he meant the crude internal horns then found in table grand and cabinet gramophones; he was clearly unaware at the time of writing of the new internal horns that were about to hit the market, although he was nonetheless right, in what there followed a revival of the external horn for enthusiasts' use. In November, with moral support from other commentators, his attitude had hardened into one of hostility for the new process and his scathing remarks were supplemented by more in January 1926.

As the Bell Laboratories' success in electrical recording had been reported in England (not in the trade periodicals), it was not difficult for Wm. B. Parkin, a contributor to 'Sound Wave', to guess that some form of electrical recording was behind the vivid reproductions which had become available. He stated that he had been asking three years earlier for large scale recordings by a new method, knowing that a scientific application of telephony, or telephone principals, was going to produce a contrivance similar to a microphone. He was the only writer in the trade periodicals of September 1925 to use the word 'microphone' with respect to Columbia's amazing 4,850-voice choir recording. He wrote "A new and splendid vista of musical accomplishment opens before us. The world's greatest musical masterpieces, many of them hitherto unknown to the gramophone, heard as they are intended to be heard, now come within the range of possibility - the whole domain of art can now be brought within the range of the man in the street." His perspicacity was justified when he wrote, "It is practically certain that the microphone was utilized - perhaps several microphones, but whether recording plant was erected on the spot or whether the sound waves were captured and transmitted to a local recording studio need not concern us Speaking from the technical point of view, I consider the present record the greatest contribution to gramophony since its inception."



THE NEW GRAMOPHONE



Turntable of the New Gramophone, showing the new design Tone Arm and Sound Box. It will be seen how comparatively slight is the external difference

Externally, and in manipulation, the New Gramophone is similar to the standard "His Master's Voice" Instrument. The secret of the amazing realism of its reproduction is the design of the special tone chamber, taper arm and a new type of sound box. The New Gramophone not only gives equal prominence to all sections of the scale from the low bass to the high treble, but it also reproduces details of orchestration that were formerly unheard. The tone is richer, rounder, and more true to the original than has ever before been heard from a Gramophone. Surface noise is practically eliminated.

In quality and workmanship the New Gramophone upholds the high tradition of all products bearing "His Master's Voice" Trade Mark. It is "all-British," the entire work in connection with it being carried out at The Gramophone Company's factories at Hayes, Middlesex.

You should take the earliest opportunity of hearing the New Gramophone, when you will agree that this great invention has to-day achieved the ideal of what a gramophone should be.

Listen for the Bass!

This view of the interior of the new machines was much used in publicity in late 1925 and early 1926 (this example comes from a 1926 catalogue). The tone-arm and soundbox were the only parts that were visibly different from the 1924-5 range of machines and the publicity department must have been hard pressed to convince the public that there really was a completely new gramophone being offered. The 'saxophone' horn in the cabinet models is comparable to that of the Apollo (p 208), though of different construction. Good quality 'small' makes like the U-phone (pp 210-211) could not effectively compete against the new HMV designs.

The late W.A.Chislett, writing in *The Gramophone* in February 1926, said he was not too keen on the new band records, as far as the solo instrumental passages were concerned, finding them less true than acoustic recordings, but he admitted that the bands sounded more like bands than they had done hitherto.

Most commentators and reviewers, unaware of the true nature of the recordings, were generally enthusiastic about the new sounds they were hearing, and the broadening of the repertoire.

Vocal and instrumental music, from soloists to large symphony orchestras, large choirs and full-strength military bands were all exploited by the new medium during the first twelve months of electrical recording. A novel feature was the taking of records in situ, in cathedrals and churches, theatres and cinemas, concert halls and opera houses, sometimes during actual performances. And as many of such edifices as were installed with organs, these were soon put into constant use in a veritable spate of organ recordings.

Musical performances recorded out-of-doors also became a regular feature of the monthly supplements, such as the annual military tattoos and a phenomenon that spread around the country for a short time, sponsored by daily newspapers: the packing of thousands of people into football stadia, theatres and winter gardens to participate in community singing. A British answer to the Associated Glee Clubs of America perhaps? Columbia even recorded its own work-force in this type of music making, within its own factory.

The use of the microphone soon induced new styles in the art of singing for recording purposes and most labels were soon to have their 'crooners' and 'whispering baritones'; Bing Crosby, Rudy Vallee and Whispering Jack Smith were three of the earliest artists to achieve immense popularity in this way.

Another 'benefit' of electrical recording was the creation of montage recordings with laboratory technicians taking parts of different recordings and re-recording them on to a new master wax, with a possibility of superimposing and mixing. As is known, some acoustic recordings were re-processed by being played over, cutting a new master, while at the same time a live orchestral accompaniment was recorded on to the same master, thus obliterating the sound of the old 'gramophone band'. Similarly, an artist was able to make a recording to be used as the basis for a duet with him or her self. With the use of telephone land lines, even two cinema organs, in different cinemas, were recorded simultaneously in duet.

Another facility was the making of a 'perfect' master from a number of takes where no take was good enough in itself, or slight damage to a used master might be rectified using other takes, or using a pressed record.

A great advantage of electrical recording was that the volume of sound registered could be determined and controlled. With the availability of electrical reproduction at a later stage, even more volume was at hand. This allowed records to be played over public address systems at theatres, cinemas, outdoor events and restaurants, which led to much contentious argument. The record companies finally associated and created an organisation to license the use of records for such purposes in the early 1930s.

The first electric recordings on HMV, Zonophone and Homochord can be distinguished by the small triangle placed after the matrix number in the area surrounding the label. Columbia and Regal have a 'W' or a 'W' within a circle somewhere in the same area. Parlophones have this 'W', but some also have a '£' sign.

Obituary

EUGENE ORMANDY

Eugene Ormandy was born on the 16th of November 1899. Within five years of that date he was able to play the violin and shortly after that time he was sent, from his home in Budapest, to study at the Royal Academy of Music.

So many children fail to fulfill the promise of their early talents. This was not the case with young Eugene. When he graduated from the R.A.M. in 1917, he had diplomas in piano, violin, counterpoint and composition. After completing his studies, he travelled extensively as a concert artist and then held a teaching post at the State Conservatory in Budapest.

Ormandy had spent a decade in America, working with various orchestras, when he was offered the position of permanent conductor with the Minneapolis Symphony Orchestra. Although he was only thirty-two years old when he accepted this offer, he did not waste any time in raising the standard of playing in his orchestra until it was recognised as one of the finest in America.

Even in his early days with the Minneapolis Orchestra, Ormandy was a prolific recording artist. The most notable examples of his output for the gramophone from that period include a fine account of Mahler's 'Resurrection' symphony (which remained in the catalogues for many years) and also music by Schoenberg, Rachmaninov and Kodaly.

In 1936, Ormandy replaced Leopold Stokowski as principal conductor of the Philadelphia Orchestra, where he continued to make pioneering records of modern music by such composers as Bartok, Richard Strauss, Hindemith and Prokofiev. Of course he did not neglect the 'standard' classical repertory on his visits to the recording studios. Ormandy's Columbia recordings are commonly found these days, containing items by Sibelius, Beethoven, Tchaikovsky, Dvorak and others.

His recording career continued with the Philadelphia until his death, at the age of eighty-five, on the 12th of March this year. The last recordings he made are of the digitally-encoded type, and they are released on Compact Discs. I feel that his massive discography will always stand as the highest tribute to Eugene Ormandy; a master musician who will be greatly missed.

John Cavanagh.

RAY ELLINGTON

News also came on March 1st of the death of the dance band leader Ray Ellington. Ellington, who was 69, will always suffer confusion with his better-known transatlantic namesake, Duke. Ray Ellington started his musical career before the last war as a drummer in Harry Roy's band. After the war, he formed the Ray Ellington Quartet and made his name on the BBC 'Goon Show'. More recently, he had worked in cabaret.

Correspondence

From Michael Walters, a question:

In the "3 o'clock" position on most HMV discs appears a letter, or sometimes two letters, in the wax. These letters are in my experience always different, even on apparently identical copies of the same disc. To what do these refer? Are they batch numbers which refer to the date of pressing of that particular copy?

And, from Eric Reiss, of Copenhagen, an answer:

A collector in Denmark once told me that early Gramophone Co. discs often have a single, large letter stamped in the record next to the matrix number. He claims that G means it is the first pressing, R the second, A the third and so on until the word 'GRAMOPHNE' has been spelled. I don't know if there is any truth to this or if you have ever heard of this theory, but I thought I'd mention it anyway.

I have heard this theory, and have no reason to doubt it; but I had never stopped to think about the repeated 'O' if the word were spelled correctly. Is it known for certain that it was the second O which was deleted, not the first? Presumably, the double letters come in when the nine single ones have been used up. - Ed.

St. Andrews, Fife

Dear Christopher,

British Phototone Record

In Hillandale 142 (February 1985) I asked for information about this type of record. My own example is a single-sided 78 rpm edge-start disc, with a chrome-yellow label printed in black and a slightly ribbed (not rubbed!) back. The label information, which obviously points towards the recording being the sound-track from a film, runs as follows:

No. 3928	Reel No. 5	Item: Second	Title: Serenade	SANDLER
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I have pursued the matter with the British Film Institute, who kindly provided the following information:

"A series of 16 Phototone reels was released in Britain in December 1928. They were produced by Ludwig Blattner and directed by John Harlow and featured musical acts popular at the time. Two of the 16 reels featured Albert Sandler. According to the British Film Catalogue he played Schubert's Serenade in number 2 and Monti's Czardas in number 5. Your record would seem to suggest that they were released the other way round."

Even better, it turns out that the British Film Institute have both the Albert Sandler films - but not the accompanying sound-track records. So I have been able to supply them with a tape of my record, and they have in turn provided me with a video-cassette of the film!

I recently spent some time at Chris Hamilton's house in Cupar trying between us to synchronise the record with the video-cassette. Eventually we got a pretty good match, and so were able to see a performance being committed to a 78 rpm wax nearly sixty years after the event....

Best Wishes, Peter Adamson.

Cupar

Dear Christopher,

On the question of Columbia prefixes, I can confirm the existence of DBBs. I have DBB5, with two songs by Raymond Newell - Boots (matr. WA9847) and Journey's End (mtr. WA9848). I have seen one or two others.

Yours sincerely, Chris Hamilton.

Northwood, Middlesex

Dear Mr. Proudfoot,

Columbia Prefixes

In response to your request for information at the foot of Page 190 of Hillandale No. 143, I am able to report that in my collection I have a record bearing a catalogue number with the prefix DBB; the details are as follows:

DBB13	(Little Dolly Daydream)	Organ solo by Quentin M. Mclean
	(Lily of Laguna)	(Christie Unit Organ)
	(Recorded in the Regal Cinema, London)	

I have two copies of the record, acquired separately more or less by accident, that is to say, without deliberate search. This suggests that it might be quite common; on the other hand, it is the only record bearing a DBB-prefixed number that I have seen.

I find that in a Columbia catalogue of 1938 this record is listed as DB13, which of course repeats the circumstances described by Mr. Adamson in Hillandale No 142, where he mentions that his record, No. DBX10, is listed as DX10.

All this seems to imply that DBB, DBX and similar prefixes may have had a very short currency, being changed to the DB, DX etc. with which we are more familiar, without alteration to the numerical parts of the numbers of records already issued. It would be interesting to know the reason for this apparent change of plan.

Yours sincerely, D.E.Haines

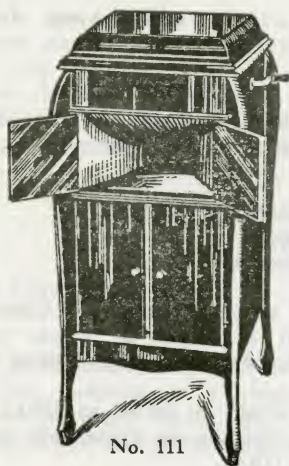
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Bournemouth

Dear Editor,

Adelaide Andrejewa Skilondz is/are the same person. She was born in St. Petersburg on February 21st 1882, and made her debut there in 1904. She later sang in Moscow, Berlin and Stockholm. She recorded for the Gramophone Co., Pathé and Parlophon.

Yours Sincerely, Ernie Bayly

Mansfield, Notts

Dear Mr. Proudfoot,

HILLANDALE 143, P. 192

Dr. Czada's query about Andrejewa (von Skilondz) is easily answered: Talking Machine Review No. 39 contains a discography, to which actual recording dates were added at pp 865 and 997 of Issue 43. Bjorn Englund queried the Mozart attribution on the basis of a 1913 advertisement which referred to Friedrich II of Prussia. I guess Bennett and Wimmer just 'assumed', as, I must confess, would I.

The D.G.G. Polydor museum in Hannover has a similar picture record made in May 1913 (a month after the von Skilondz) of Elizabeth van Endert singing *Dass du mich liebt* by O.van Chelius to celebrate the marriage of Princess Victoria Louise of Prussia and Ernst August of Brunswick.

The museum custodian also claimed to have a similar record of Queen Victoria: that's almost certainly the special "God Save the Queen" recording. At the time of my visit I also noted "Leo XIII": what she was referring to I don't now recall but I would have satisfied myself that it wasn't a disc recording of Pope Leo - if it had been, it would have had considerable interest. Gaisberg would surely not have referred to his failure to capture the Pope (when that was his avowed intent) if he had in fact done so.

Best Wishes, John Milmo.

Woking, Surrey

Dear Christopher,

At the last AGM the question of the phantom No. 3 HMV soundbox was raised. Would not this number have been allocated to the Lumiere diaphragm which was introduced to the public in 1924, a year before the No. 4 soundbox?

I recently visited the Science Museum in London, and found that the talking machine collection has been relegated to the basement storage department. This is rather unfortunate, as things in national museums which are removed from display take many years to re-emerge, if they ever do. I wrote to the department head, who replied that a new gallery is planned to incorporate talking machines, provisionally scheduled for 1986. A sad situation indeed, but we cannot complain now that exhibits gather dust on show.

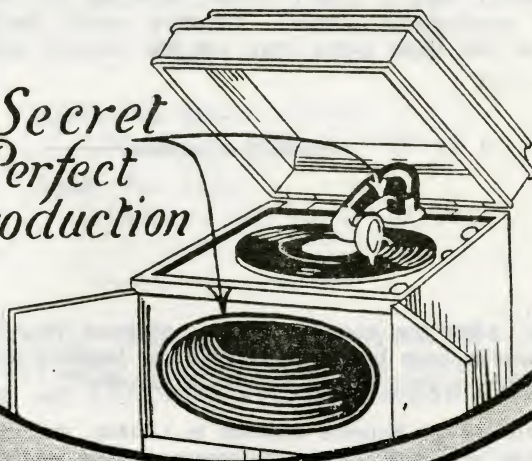
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John McCormack

by Peter Martland

Part 3

It was in the 1920s and 1930s that official recognition came to John McCormack. He gained the freedom of the City of Dublin, became the Vice-President of the Royal Irish Academy of Music, gained Honorary Degrees from Notre Dame and the National University of Ireland, was awarded the Legion of Honour by the French Government for his services to French war charities. And John, whose whole life was sustained by a fervent devotion to the Church, gained many Papal honours, culminating in his being made a Count of the Holy Roman Empire in 1928 by Pius XI. The honour was all the more signal in that it was made hereditary. As Count McCormack, he registered his coat-of-arms, a shield with four harps, with a black cat on top and the motto "Felis Demulcta Mitis" - "A cat stroked is gentle". At the Eucharistic Congress in Dublin in 1931, he sang Cesar Franck's *Panis Angelicus* in Phoenix Park during the celebration of High Mass. It was broadcast throughout the world.

James Joyce, living in Paris at the time, saw his old singing partner join what he saw as the Irish establishment and used him freely in the character of "Shaun the Post" in *Finnegans Wake*. Joyce's description of Shaun's costume is partly a composite of McCormack in papal uniform: "Shaun is seen as being dressed like an Earl". He indulges in a surrealistic sketch of McCormack's dress: Shaun's "Irish terrier collar" is the starched ruff and collar and the "peas, rice and yeggy-yoke" are papal decorations. Joyce writes that Shaun sports "Star-spangled zephyrs", a quadruple reference to: the large sash on which he wore his star-shaped papal decorations, his recording of the "*Star-spangled Banner*", his American citizenship and *Care Salve*. Less kindly, Shaun satisfies his great hunger "by meals of spadefuls of moulded food" and lengthy descriptions of his "gourmandising and gourmetering" during the 1920s and early 1930s. McCormack gained a great deal of weight, tipping the scales at 18 stone at one stage.

In 1924 McCormack returned to the HMV studios and began a fresh recording career with them. In all, he recorded 220 discs in eighteen years. Most were made by the electrical process, which some argue did not treat McCormack's voice as kindly as the old process did. Comments about a nasal quality and a reediness abound in reports of the time. Some of this is undoubtedly true, but the fact is that John McCormack's voice, particularly after 1934, had lost some of its glorious bloom. He did not take care of himself, the eighteen stone, his eating, drinking and smoking habits and the punishing schedule of concerts year after year took its toll. Yet even in this phase of his career he had more to add, particularly in his interpretation of lieder and in the Irish songs of farewell.

Of his lieder singing, Newman wrote "...it was the art of the unrelenting student, revealing rare qualities of musical understanding, of poetic feeling, of style, of phrasing, of nuance." To his Irish songs of farewell, particularly in the latter part of his career John was able to bring a reflective air and a sincerity impossible in a younger man. They reveal not only that supreme musicianship, but also that rare art of the story-teller, able to conjure up vivid and colourful images.

In *The Irish Immigrant* John recorded for Victor in 1928, you can feel yourself stepping into a scene that he is creating for you. Listen too for the fervour and intensity of the last phrase.

Of *Terence's Farewell to Kathleen* (HMV 29 Aug. 1934), Desmond Shawe-Taylor has written "(this is) one of the most moving performances. The singer conjures up the whole sad little scene: the poor Irish boy, in the black light of early morning, who knows all too well (whatever he might say) that he will see no more of his Kathleen, because she is moving out of his sphere. Pathetic is the touch of humour in the line "You'll be speaking such beautiful English", heart-rending the fluster and flurry of the last moments he cannot recall the one thing that is most needful to say. I will not deny that, after the scores of playings, I find the emotion in this record as disturbing as though the song were Schubert."

McCormack continued the concert circuit into the mid 1930s, but tastes in America were changing; the ballad had given way to Afro-American popular music and the tenor to the microphone crooner. The depression, too, had bitten deep into his audiences. He made his final records for Victor in 1931, and his farewell tour of the U.S. in 1937. In these final years in the U.S. he added broadcasting to his media of communication.

His farewell to Britain occurred in the Royal Albert Hall in November 1938. He sang a full programme, accompanied by Gerald Moore, concluding with a song especially written for the occasion by General Sir Frederick O'Connor - *The Old House* (recorded by HMV on November 30th 1939).

It was a difficult retirement; it is not easy after the best part of forty years to believe that the race is run. So when war came in September 1939, Count John announced a series of concerts in aid of the Red Cross. He threw himself into the initial thirty-nine concerts between November 1939 and May 1940, then made several other tours. He broadcast regularly and was a frequent visitor to the recording studios. He and Maggie Teyte were the only two HMV red label singers in Britain at the time. John Amis recalled seeing him in 1941, "a portly, friendly, dignified figure, old before his time", he thought.

John's many records of this final phase provide us with a fitting and not unhappy epilogue to a career in the recording studios of almost forty years. He gave up singing altogether at the end of 1942, his lungs simply gave out, the result he wryly put it of "holding the big ones too long". Lily took him back to Ireland where he died at the age of 61 on the 16th of September 1945.

Vincent O'Brien, his first music teacher and still Choirmaster of the Palestrina Choir, arranged for the choir to sing at Count John's graveside the *Benedictus*. Of his friend O'Brien wrote "John McCormack was a unique figure. He would have won distinction in any career that he might have adopted. He was not just a great singer but an accomplished musician."

Ernest Newman concluded his assessment in the Sunday Times saying; "He was the supreme example of the art that conceals art, the sheer hard work that becomes manifest only in its results, not in the revolving of the machinery that has produced it. He never stooped to small and modest things; he invariably raised them and with them the most unsophisticated listener, to his own high level. I never knew him in his public or his private singing be guilty of a lapse of taste, of making an effect for mere effect's sake. He was a patrician artist, dignified even in apparent undress with a respect for art that is rarely met with among tenors. There is no one to take his place."

Newman was right. John's day was over and changing musical tastes ensured that he was never replaced. John wrote shortly before his death; "I live again the days and evenings of my long career. I dream at night of operas and concerts in which I have had my share of success. Now like the old Irish minstrel I have hung up my harp because my songs are all sung."

Yet John was wrong. His recorded legacy is now available to us in greater quantity than ever they were in his lifetime. His gentle spirit reminds us every time we play his records of the glorious voice and art that was John Count McCormack.

Sources

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L.F.MacDermott Roe: *The John McCormack Discography*

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L O N D O N M E E T I N G S

January 29th 1985

The Society was pleased to welcome Derek Lewis, who is in charge of the B.B.C. gramophone record library. His talk covered the acquisition of records, the storing and cataloguing of them, and the lending to various B.B.C. radio stations.

The B.B.C. collection consists of some 350,000 records, which are all card-indexed. Many items are still on 78s, while the number of l.p.s and singles is growing. They do not acquire a copy of every record published, as they would be unable to accommodate them.

The Despatch department is kept busy packing and sending records to provincial radio stations. Asked about breakages of shellac 78s, Mr. Lewis said that unfortunately these do occur. L.p.s also suffer damage occasionally with the amount of handling, but are easier to replace. There are some cylinder records at the B.B.C. including Gladstone, Florence Nightingale and Sir Arthur Sullivan. It is difficult with these early records to know if they are originals or copies, but it is suspected that those at the B.B.C. are copies.

A question was asked about taping fragile 78s instead of sending the actual discs to other studios. This is possible in some cases, but the question of copyright has to be

carefully watched. Even the playing of originals has to be closely monitored and it sometimes proves to be quite involved.

A few records were played towards the end of the programme to illustrate differing interpretations of various works and differing quality of recording. Altogether a fascinating evening: many thanks to Mr. Lewis for sparing the time to lecture to us.

February 26th 1985

Ted Cunningham gave us a very entertaining evening playing "Curiosities from my collection" and, after the interval, "Records from the Catford Institute of Recorded Sound".

Among the "Curiosities" heard were: a publicity record for the film 'London Town' with Sid Field and Petula Clark; Johnny Stanley 'It's in the Book' sketch (reminiscent of Dan Leno); a Negro wedding ceremony; an aluminium Kodisk so noisy we couldn't hear the recording (if it had one); a Russian record 'We Have Worked Well Today'; a West African dance record; a Chinese record of a battle scene; and an International Broadcasting Record of a Radio Normandy programme.

Part Two consisted of more "Curiosities", this time allegedly found at the Catford Institute of Recorded Sound. These items were hilarious and extremely well mounted, and must have taken many hours to prepare. Among the items heard (via tape) were: a cylinder record of the discovery of the Cullinan diamond; Maggie Teyte and her sister singing an item by Fauré; a B.B.C. man being shown round the Catford collection; a hilarious recording of our Chairman being questioned by a reporter, and the answers being transposed out of context; and eighteen singers in the Lucia di Lammermoor aria, *Chi mi frena*. This was, presumably, the three H.M.V. DQ records played together, no mean feat.

Many thanks, Ted, for a very entertaining evening, and we look forward to many more.

March 12th 1985

Dave Roberts presented a programme on the recording career of Peter Dawson, and apart from the selection of records to illustrate the talk, there were also several phonographs and gramophones on which to play them. These were an Edison Home, a Triumph and an Opera; a double-spring Monarch, an H.M.V. Model 32 and a 102 portable. The records ranged from one of the first (as Leonard Dawson) to a stereo issue on l.p. The records were mostly played on the appropriate machine, although in a few instances later records were played on an earlier machine, so that its performance could be assessed.

Peter Dawson was born on January 31st 1882 and was the youngest of nine children. He won a scholarship at Ballarat and came to England to study singing. Sir Charles Santley took him in hand. He began recording for Edison Bell in 1904, as Leonard Dawson, and his record of Navajo was played. (*Goodbye my Bluebell* was another made at the same time). A record of Charles Santley was also played, a G.& T., *The Vicar of Bray*.

A few records of Peter with others were then played; Sullivan Operatic Party on G.& T. (*Mikado* excerpt), *Ora Pro Nobis* on Zonophone (Dawson in the quartet), *Faust* Trio with A.Yarrow and E.Pike and, also with Pike, *In this Solemn Hour* (*Force of Destiny*).

A few cylinders were then played, including *Won't you Come Back to Connemara?*: *Off to Philadelphia*: *The Volunteer Organist*: and Dave's favourite stunt of two Blue Amberols on two machines running together (Toreador song from *Carmen*). One cylinder (White 172) labelled as Will Danby (*Where Oh Where has my Little Dog Gone?*) was thought not to be by Dawson, although this was one of his aliases.

Some records of Dawson under other aliases were then heard, including: George Welsh on Zonophone, Robert Woodville, Will Strong and Hector Grant on Twin. Among other records made by Dawson under his own name were *The Floral Dance*, *Old Father Thames*, *Old Man River*, *Now your Days of Philandering are Over* and of course one of Peter's own songs, *Route Marchin'*. An Australian H.M.V. issue not released in this country was played, *Advance Australia Fair*. *Mandalay Scena*, in which all four tunes (by Willeby, Cobb, Hedgecock and Speaks) are set to Kipling's words, and a track from an Australian stereo l.p. set, *Clancy of the Overflow*.

A delightful evening and a programme which must have taken much time to assemble together with the fine display of machines. Many thanks, Dave.

April 9th 1985

The evening's subject was a first as far as we are aware, consisting of a display of needle tins and discussion. The presenter was, of course, Ruth Lambert, and we thank her for bringing along an impressive array of needle tins, which was indeed only a small part of her collection.

Over the years, these tins were thrown away as soon as they were empty, and so it is surprising perhaps that so many have survived. There were many different designs: some with the brand name of the contents, some with record names, and some with advertising material. Some attractive ones were triangular and others had 2, 3 or 5 compartments. The old German tins had the best pictures, but there were some British picture tins. There was one group of five German tins depicting popular dances. The familiar British Songster tins came in a variety of colours, and one, for export, had the name 'Stead' (the maker's) on it.

Record names on tins included Decca, Embassy and eight varieties of Beltona. Some had dealers' names, such as 'Duck, Son and Pinkers'; Jake Graham of Liverpool and Curry's. Of the multi-compartment tins there was 'All-U-Need', with a Guardsman badge in the middle, and another with Scala; a Pegasus with compartment for used needles, and a slide underneath for emptying out the used compartment.

'The Zulu' was thought to be the oldest tin on show. Most tins originally held 200, but a few contained only 100, while an Aeolian Vocalion tin had held 1,000. Circular tins included the three-division Columbia and a saucer-lid tin from the Scottish Co-op. An interesting talk which showed us how fascinating this hobby can be.

People become and remain members of the Society for various reasons. There are those who are only interested in the recordings and see machines as a means to an end while others find machines to be the main attraction. Some find the whole history of the Industry fascinating; others concentrate on one personality. Gregarious types like to attend meetings; others cannot be persuaded to meet their fellow members. Some are proud, even eager, to show off their collections; others are almost secretive. The categories are almost endless. Then there is the split between those who are content to remain passive about the ways things are run and those who are not. Amongst the latter, there is a further sub division in the way views are expressed. Constructive criticism is essential if any society is not to become moribund; destructive, or at least non-constructive criticism does not advance the "cause". While entirely respecting and understanding the views of members who are content with the status quo, the Society must be flexible to be able to meet the changing needs of members as a whole. The one occasion when opinions can be freely expressed is the AGM where normally attendance is quite low considering the total membership. If you want the Society to operate in a manner you feel is right, this is just the opportunity to make your views known. This year's AGM and Phonofair is on the 14 September at Oldbury. Are you going?

Attendance at regional meetings was very much on the mind of Severn Vale secretary Laurie Wilson when the last meeting attracted only 4 members. As he so aptly pointed out in a letter to members meetings are, or should be, arranged to suit the interests of all but he cannot do that if no one contributes any ideas. Neither can it be a one man band and everyone should be prepared to contribute something however small. Severn Vale meetings are not usually poorly attended but fresh thinking and contributions would be welcome - a thought which may be appropriate to all regions.

However the East Fife branch at least does not appear to have any problem with attendance or arrangements at meetings. There have been meetings in March, April and May where the format followed familiar lines. Two were held at the home of Chris Hamilton where various machines and soundboxes were compared for acoustical excellence, generally by playing a selection of old time music hall artists presented by Chris from his extensive collection. The April meeting was at the home of Douglas Lorimer who has a wide knowledge of the history and discography of many brands of disc records. His personal collection of carefully filed and catalogued records numbers around 20,000! Again a feature of the evening was a comparison of the capabilities of machines and soundboxes which ranged from Parlephone, HMV, Decca and a home made machine to play 14" Pathe discs.

Similarly, the Midlands branch seems to have got the act together as they say. A good turn out in March enjoyed John Stroud's programme of vintage sound films. There were shorts of Shirley Temple, George Formby Jnr, W.C.Fields and a half hour film of Ina Ray Hutton and her all girl orchestra. Made in the 1940s, this latter film featured some fine swinging numbers and two or three variety acts. For the April meeting the Branch was fortunate to have a guest speaker. Mr Ray Badham, describing himself as a semi-pro and entertainer at the piano gave a detailed account of his life in the show business world. In his time he has been a member of the bands of Maurice Winnick and Notts based Billy Merrin and as an accompanist to G.Formby, G.H.Elliott and Randolph Sutton. It so happened that Mr.Badham is well known to member Gerry Lee, who although 70 can still produce a fine tenor voice and it was only natural that they should perform several songs together. Mr. Badham, who promised to return, also played some of his personal favourites illustrating his ability to perform a wide range of musical styles.

Vitaphone

A REVOLUTION IN THE CINEMA

G.W.Taylor

The late 1920s witnessed a turning point in the history of the cinema, with the coming of sound. These articles will be concerned with aspects of the key development which ushered in the sound era, the Vitaphone sound-on-disc process, which was first shown in public in 1926. This article is concerned with the history and technical description of Vitaphone. Later articles will describe the first programmes of films and consider in more detail the making of shorts by operatic singers familiar to us from their contemporary cylinders and discs.

The term 'silent cinema' is, of course, a misnomer; from the earliest days, films had been accompanied by sound of some sort - a piano, an orchestra in the bigger houses, or even synchronised cylinders and discs. An earlier article (Hillandale 140) was concerned with films of opera with sound from synchronised records.

However, all the earlier attempts at using recorded sound had, at best, only limited popularity, due to poor sound quality, or poor synchronisation of sound and film, or inept operation in the cinema; and, probably, boredom on the part of the public. By the mid twenties, the art of telling stories with pantomime only (aided by the occasional title) had been so highly developed, that giving the actors voices seemed hardly necessary, though readily possible by this time. However, much more promising appeared the use of synchronised sound for accompaniment music, as well as for sound effects and providing voice for lectures, speeches and travelogue commentary (Kellog 1). In addition, the considerable improvements in sound quality resulting from electrical recording, amplifiers and better loudspeakers had rendered the introduction of such recorded sound a practical proposition.

By 1925, there were two approaches to the problem of synchronised film sound, and both were at a comparable stage of development - sound-on-film and sound-on-disc. The main exponent of sound-on-film, or the optical soundtrack (which became the norm) was the American Lee de Forest, also responsible for several basic developments in electronics. By the early 1920s, de Forest's Phonofilm system had advanced to the stage that public showing of short films was being undertaken. At the same time, Bell Telephone Laboratories and Western Electric (the research and manufacturing/marketing arms respectively of American Telephone and Telegraph Company, ATT (Geduld p104)) were working on both systems with equal vigour (Kellog 1); after all, many key aspects were common to both - microphones, amplifiers and loudspeakers, in particular. Western Electric had developed the electrical disc recording process licensed to Victor and Columbia in 1925 and so it is not surprising, perhaps, that the film sound-on-disc process was the one they pushed at this time in an effort to interest the major film producers. Though the optical sound track was also in an advanced state of development, the disc recording system represented an older art in which there were fewer uncertainties. These considerations should be borne in mind as otherwise, viewed with hindsight, the decision to go for sound-on-disc rather than sound-on-film appears incomprehensible.

Western Electric's first move was to try and interest the major film producing companies in their sound system. In 1924, they showed a number of short test films of songs and dance bands to the major producers. Enthusiasm was warm for the technical aspects of the new sound films, but no major producer wished to abandon well-established silent film production and undertake the unknown hazards of the sound film.

The Warner Brothers' film producing company was relatively late in the game, being incorporated in 1923. By 1925, it controlled few theatres for exhibition purposes, and was having difficulty in marketing its silent films. Warners had not been invited to the original demonstration of the Western Electric sound-on-disc system, but they were very impressed with it on a later occasion. In a desperate gamble to retrieve their failing fortunes, Warners signed a contract for development with Western Electric on Jun 25th 1925. Warners' aim was to provide not dialogue but merely musical accompaniment. A Western Electric sound crew was moved into the old Vitagraph studio in Brooklyn, recently acquired by Warners. Here, experimentation was carried out to show that commercial operation would be practical. However, the Vitagraph studio was not designed for sound, of course, and the lack of soundproofing made it really unsuitable for sound film production. By the spring of 1926, Warners decided to prepare for a commercial launch of the sound-on-disc system. On April 20th 1926 they combined with Western Electric to form the Vitaphone Corporation in New York. Though two of the shorts produced at the Vitagraph studio were released for public exhibition, the production of shorts for commercial release was transferred to the old Manhattan Opera House, which was leased by Warners for a year in an effort to find conditions more congenial for sound film production (Geduld p114). In fact, the Manhattan was not very suitable, and the rent was high - both factors in persuading Warners to move production to new sound stages in Hollywood in 1927 (Limbacher p208).

The first Vitaphone programme, consisting of a series of short films and a feature, *Don Juan*, with synchronised musical accompaniment (and one or two sound effects), was presented on August 6th 1926. It was an outstanding critical and commercial success. Warners expected that the effectiveness of Vitaphone in providing musical accompaniment to silent films would decide the future of the system, and indeed, this was the aspect of the first shows that received the highest critical acclaim. The talking picture as such did not excite much interest until the synchronised casual dialogue in Jolson's *The Jazz Singer*, a Vitaphone feature of 1927, was heard.

In the spring of 1927, the Vitaphone equipment was moved to Hollywood (for the production of *The Jazz Singer*), and soon after Warners, who were on the verge of bankruptcy, acquired a 100 per-cent interest in the Vitaphone system.

Meanwhile, an agreement with William Fox (a major producer who was interested in the Western Electric amplifier used in Vitaphone) had facilitated getting further theatres wired for Vitaphone sound - ironic because Fox was promoting the Movietone sound-on-film process. By October 1928, Warners are supposed to have produced over 400 shorts (Walker p92) apart from several synchronised features, and, apparently because Warners thought the supply of local talent was exhausted, production of ten shorts was transferred back to New York.

Improvements to the sound-on-film process, for example Fox's Movietone, had been going ahead, and by 1928, the technical quality and obvious convenience relative to sound-on-disc were becoming apparent. By February 1929, even Warners were experimenting with optical sound. They discontinued making sound-on-disc films in 1930.

In spite of the emergence of optical sound by 1930, many theatres in the States were by then wired for sound-on-disc, and indeed, had been using the system successfully for several years. Those sound-on-disc features that survive, such as *The Jazz Singer* have, of course, been re-recorded with optical sound. At the time, however, the reverse process was not unknown - for example, the 1929 McCormack feature *Song O' my Heart* (a Fox Movietone film) was re-recorded in 1930 on to disc by Fox, presumably for use in theatres not wired for optical sound.

Technical Description of Vitaphone

Vitaphone was a sound-on-disc film system. Film, be it silent or sound, is produced in units of one reel, that is, up to 1000 feet of 35mm stock, running (at 24 pictures a second) for eleven minutes. One Vitaphone sound disc was designed to last for one reel of film; the projectionist would then change to a second projector and start up a second disc. The record side had to run, therefore, for up to eleven minutes.

The theory behind the design of the Vitaphone disc was as follows: (Kellogg 1) It was not desirable, with record materials then available, with their high background noise, to reduce appreciably the amplitudes of the groove cuts, and so groove pitch could not be reduced appreciably from that in use on current 78s, about 100 grooves per inch. To maintain sound quality, there was a minimum acceptable linear needle tracking speed. With a given groove pitch and minimum velocity, the maximum playing time for a given record diameter is obtained by recording into half the maximum diameter, and the required playing time then determines the required size and rotation speed. While engineers could take some leeway, the choice of 16 inches diameter and 33 $\frac{1}{3}$ rpm speed approximately meet the requirements. The discs are lateral cut, single-sided and centre-start (see note at end). The recordings were processed by Victor, at least at first.

To reduce surface noise further with the high amplification necessary in the theatre, the abrasive normally added to the shellac mixture to reduce wear was left out (RW p286). The surfaces were indeed much smoother but also less durable. The records were provided with a space on the label to indicate the number of playings, which was strictly limited. Indeed, on a long-running show, records were changed once a week, and the old records broken. Four copies of each record were provided to the theatre with the film, and fresh records were issued when the film was sent out again.

There is a picture of a Vitaphone record in Coe's book (p100). The label in the centre has the corresponding film reel number prominently displayed, together with the title of the film (in this case the feature *Sunny*, released in 1930).

The disc was clamped to the projector turntable with a cap on the centre spindle; this was a safeguard, as the records were heavy enough to remain held on the turntable by friction alone. The electrical pickup (which is described by Rainey) used a special tungsten (wolfram) needle which was changed each day.

The film projector and disc turntable were driven by the same synchronous motor, giving a mechanical interlock. Flexible couplings were used to isolate the turntable from vibrations induced by the drive. By 1931 (when Brown published his book), the drive to the turntable may have been from a separate synchronous motor, fitted with a heavy flywheel, and driving the turntable through two flexible couplings and a 'series of springs' (Erown: pp 65-6).

The film and disc were started together as follows: on the film, a frame labelled 'start' was put in the projector gate. On the disc, a radial line indicated where the needle was to be placed, and there was a quick lead-in spiral provided. Why were the discs centre-start? Two reasons are advanced by Brown (p 199). First, he suggests that centre-start synchronisation marks were easier to make and to place the needle on. Second, he suggests that, as sound quality improves with tracking speed, and deteriorates with needle wear, it was best to start with an unworn needle and low tracking speed in the centre and move to higher tracking speeds as the needle wore. There may be something in this; but if needle wear was a problem, why were the needles changed only once a day? Each needle must have run for several hours, whereas each disc ran for only ten minutes or so and would not have been played more than about three times a day. A third reason for centre start may be that suggested in the Guinness Book of Recorded Sound (p78), that the operator had a better chance of seeing when the needle reached the end of the side, so that he could switch to the next side, on another turntable, with no break in continuity.

Film was shot and sound recorded on disc at the same time. Synchronisation was achieved electrically between camera and recorder; the system is described by Peck. Once started, shooting and recording had to proceed until the end of the film, lest synchronisation be lost. In order to vary camera angle, several cameras were run simultaneously, and the films cut and spliced in such a way as to maintain synchronisation with the sound.

Though improvements over the years to both film and projectors had much reduced the frequency of film breakage, breakage did occur, and repairs had to be made, with a possible loss of footage. Unless this footage was replaced, synchronisation between film and disc would be lost. Therefore, a reel of blank film was supplied with each show to make up the necessary lost frames.

In the Warner theatre, the sound was projected from behind and below the screen, using folded re-entrant horns designed by Western Electric, and of the same design principles as used in the Orthophonic Victrola. They were fitted with dynamic-type driving units, themselves recently developed by Western Electric in time for the Vitaphone premier. Four horns were used, twelve and fourteen feet long. Two were mounted at the line of the stage and pointed upwards, and two mounted at the upper edge of, or above, the screen, pointing somewhat downwards; a diagram of the layout is given by Rainey. Thus, considerable care was taken over sound distribution, with considerable concern about background hiss from the amplifier and disc surfaces.

Why did Vitaphone succeed where earlier record systems had failed? There are many reasons, of which the following seem the most important:

1. Sound and synchronisation were good.
2. By 1927, the film itself was beginning to require sound for its story.
3. The expansion of radio had accustomed the public to 'disembodied' sound of good quality.
4. The public had liked the novelty of sound films, and technical improvements were rapidly made before the novelty wore off.

The success of Vitaphone resulted in the rapid transition from silent to sound cinema in the late 1920s. It also led to a multiplication of sound systems, some on disc and some on film. In early 1930, there were some 234 different types of cinema sound equipment including the large number that were designed for disc only. The RCA Photophone system originally allowed the use of either disc or optical sound track. We have seen how Fox, the pioneer user of sound-on-film, also had at least one of his films re-issued

with sound-on-disc as late as 1930.

The next article will consider the first Vitaphone programmes, particularly the short films, and their critical reception.

FOOTNOTE

There is some doubt about Vitaphone disc diameter. Most references give it as 16 inches. However, Welch & Read (p286) say it is up to 20 inches, and Knight (p146) says 13 to 17 inches. A standard reel would be accommodated by a 16 inch disc - some of the later shorts ran for less than one reel, and could be accommodated by a smaller disc - is this the explanation of the varying disc sizes quoted?

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ELECTRICAL RECORDING FROM CYLINDERS

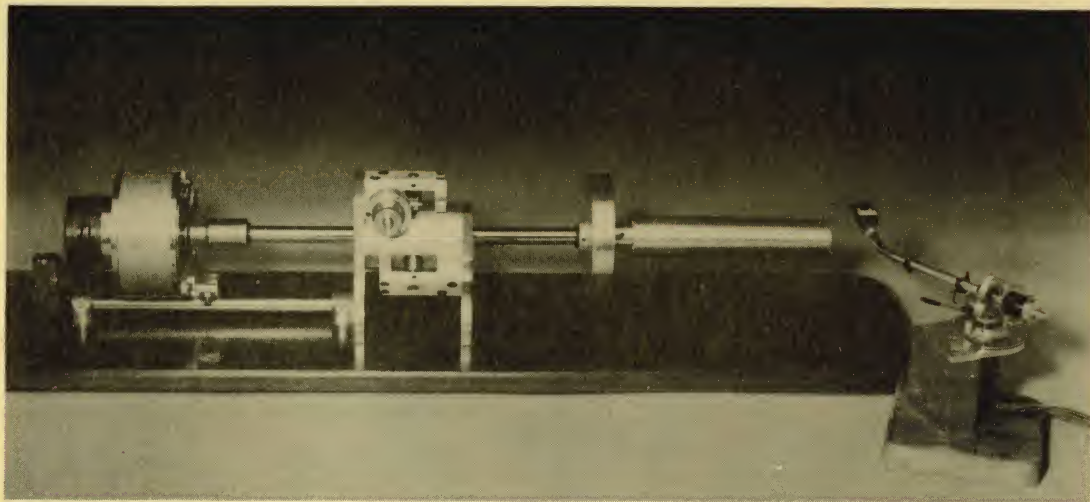
From Devon Joe Pengelly has sent details of a universal electrical cylinder replay machine he has developed. He is the first to say that he has called on the expertise of others (specifically, Terry Bouncer, Engineer in charge, Dept. of Mechanical Engineering at Plymouth Polytechnic and Mike Stringer, the engineer responsible for the construction of the machinery), but the pick-up and recording systems are of his own design, and it is this knack of how to extract the most from early cylinders and discs that has brought him to the very front of this sphere of knowledge. Only the other day, someone from the B.B.C. was saying that Pengelly has the lead on them in reproducing from old recordings.

Of particular note recently has been a Pengelly recording of an Edison Kinetophone cylinder, one of the outside Blue Amberol types that accompanied Edison films for a year or two from 1913. A few months ago Joe Pengelly worked and reported on the relative recording speeds and qualities of Edison lateral and vertical cut discs for this journal, and has made presentations at meetings of the American Association for Recorded Sound Collections (ARSC) and also at the White House. High places indeed, but Joe is well in front in this type of work.

George Frow



And now, until bed-time, George is going to entertain you with his collection of bagpipe records



THE PENGELLY UNIVERSAL CYLINDER MACHINE

(See article by George Frow on Page 222 and front cover photo)

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